



Grade Separated Crossings and Safety

Frank Vacca, Chief Program Manager

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RECENT RAIL ACCIDENTS AT GRADE CROSSINGS

- February 3: Metro North - Valhalla NY
- February 23: Caltrain - Bay Area
- February 24: Metrolink – Oxnard, CA



GRADE CROSSING STATISTICS – 2014*

- **Number of Highway-Rail Grade Crossings**

- » Nationally = Greater than 38,000
- » California = 9,303

- **Number of Accidents**

- » Nationally = 2,068 – Down 1.3%
- » California = 112 – Down 23%

- **Fatalities**

- » Nationally = 239 – Up 4%
- » California = 29 – Down 12%



* 2014 data through November

Source: FRA Office of Safety Analysis website, <http://safetydata.fra.dot.gov/OfficeofSafety>

WHAT IS GRADE SEPARATION?

- Roadway is Re-Aligned Over or Under the Railway
- Hazards are Eliminated



BENEFITS OF GRADE SEPARATION

- **Benefits Include:**

- » Safety
- » Decrease in Traffic
- » Reduction in GHG Emissions
- » Improved Train Operations



- **Regulated by the California Public Utilities Commission (CPUC)**

- » Rail Safety Branch
- » CPUC Sets Priority List for Grade Separations

GRADE SEPARATION: OUR LONG-TERM PLAN



GRADE SEPARATION AND SAFETY PLAN

- **Long-Term:**

- » California's High-Speed Rail System will have No At-Grade Crossings Between San Francisco and Los Angeles
- » Over Time it Will Be 100% Grade Separated

- **Short-Term:**

- » Dedicated High-Speed Right-of-Way will have No At-Grade Crossings
- » 420 Miles with Grade Separations in Phase 1
 - San Jose to Los Angeles Fully Grade Separated
- » Bookends will have "Protected" At-Grade Crossings
 - Urbanized Environment
 - Complicated Design
 - Impacts to Communities & Railroad Operations

SNAPSHOT OF REGIONAL IMPROVEMENTS

- **Northern California:**

- » Between San Jose and 4th and King: 44 Existing Grade Crossings
 - Will be Examined as Part of Environmental Review Process

- **Central California:**

- » CP 1, CP 2-3 & CP4:
 - BNSF: 39 Existing Grade Crossings = Eliminated
 - UP: 16 Existing Grade Crossing = Eliminated
- » Major Improvements in Downtown Fresno

- **Southern California:**

- » Key Grade Separations Included in the Southern California MOU:
 - State College, Dornan Street, Rosecrans Ave/Marquardt Ave = To Be Eliminated

GRADE SEPARATION: FRESNO IMPROVEMENTS



SAFETY IMPROVEMENTS

- **Quad Gates**
 - » Block All Lanes of Traffic of Both Sides of Track
 - » Gate Delay on Exit Side
 - » Possible 98% Reduction in Collisions (UC Berkeley Safe Transportation Education and Research Center)
- **Intrusion Detection**
- **Positive Train Control (PTC)**



SAFETY IMPROVEMENTS & PARTNERSHIPS

- CPUC
- Caltrans
- Operation Lifesaver
 - » <http://www.caol.us/>
 - » California High-Speed Rail is a Participant
- Regional Partners
- Cities, Counties and Local Governments

